Amendments To The Claims:

- 1. (Currently Amended) A medical device comprising a balloon, the balloon formed from a block copolymer thermoplastic elastomer polymer, the polymer being characterized by a flexural modulus of about 150,000 psi or less and a Shore D hardness of at least 60, the balloon having a single wall thickness of less than 0.001 inches and a wall strength in excess of 15,000 psi.
- 2. (Original) A medical device as in claim 1 wherein the wall strength of the balloon is in excess of 20,000 psi.
- 3. (Currently Amended) A medical device as in claim 1 wherein the polymer is further characterized by an ultimate elongation of about 300% or higher.
- 4. (Original) A medical device as in claim 1 wherein the balloon has a nominal diameter of 1.5-10 mm.
- 5. (Original) A medical device as in claim 1 further comprising a catheter having a distal end, said balloon being mounted on the catheter near said distal end.
- 6. (Original) A medical device as in claim 1 wherein the block copolymer has a Shore D hardness in the range of 65-75 and a flexural modulus in the range of 50,000-120,000 psi.
- 7. (Original) A medical device as in claim 1 wherein the polymer is a polyether-block-amide copolymer comprising at least two polyamide hard segments and at least two polyether soft segments.
- 8. (Original) A medical device as in claim 7 wherein the polyamide hard segments are polyamides of C_6 or higher carboxylic acids and C_6 or higher organic diamines or of C_6 or higher aliphatic ω -amino- α -acids, and the polyether soft segments are polyethers of C_2 - C_{10} diols.

- 9. (Original) A medical device as in claim 8 wherein the percentage by weight of the block copolymer attributable to the hard segments is between about 50% and about 95%.
- 10. (Original) A medical device as in claim 6 wherein the block copolymer is represented by the formula:

$$HO-(C-PA-C-O-PE-O)_{\overline{n}}H$$

in which PA is a polyamide segment of molecular weight in the range of 500-8,000; PE is a polyether segment of molecular weight in the range of 500-2,500 and the repeating number n is between 5 and 10.

- 11. (Original) A medical device as in claim 10 wherein the block copolymer segment, PA, is an aliphatic polyamide of one or more C_{10} C_{12} aliphatic acids and one or more C_{10} C_{12} aliphatic diamines or of a C_{10} C_{12} aliphatic ω -amino- α -acid.
- 12. (Original) A medical device as in claim 10 wherein the polyamide segment, PA, is selected from the group consisting of nylon 12, nylon 11, nylon 9, nylon 6, nylon 6/12, nylon 6/11, nylon 6/9 and nylon 6/6.
- 13. (Original) A medical device as in claim 10 wherein the polyamide segment, PA, is nylon 12 of a molecular weight of 3,000-5,000, and the polyether segment, PE, is poly(tetramethylene ether) of molecular weight between 500 and 1250.
- 14. (Original) A medical device as in claim 10 wherein the polyamide segments, PA, comprise between 80 and 90% by weight of the polyamide/polyether polyester.

- 15. (Original) A medical device as in claim 10 wherein said polyether segment, is selected from the group consisting of poly(tetramethylene ether), poly(pentamethylene ether) and poly(hexamethylene ether).
- 16. (Withdrawn) A medical device as in claim 1 wherein the polymer is a polyester-blockether copolymer comprising at least two polyester hard segments and at least two polyether soft segments.
- 17. (Withdrawn) A medical device as in claim 16 wherein the polyester hard segments are polyesters of an aromatic dicarboxylic acid and a C_2 - C_4 diol and the polyether soft segments are polyethers of C_2 - C_{10} diols.
- 18. (Withdrawn) A medical device as in claim 17 wherein the percentage by weight of the block copolymer attributable to the hard segments is between about 50% and about 95%.
- 19. (Withdrawn) A medical device as in claim 16 wherein said polyester segments are polyesters of an acid selected from the group consisting of ortho-, meta- or para- phthalic acid, napthalenedicarboxylic acid and meta-terphenyl-4,4'-dicarboxylic acids and a diol selected from the group consisting of ethylene glycol, 1,3-propane diol and 1,4-butane diol.
- 20. (Withdrawn) A medical device as in claim 16 wherein the block copolymer is poly(butylene terephthalate-*block*-poly(tetramethylene oxide).
- 21. (Original) A medical device as in claim 1 wherein the block copolymer is further characterized by a ultimate tensile strength of at least 6,000 psi.
- 22. (Original) A medical device as in claim 1 wherein the polymer has a Shore D hardness of at least 63.